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Mass Constraints on Fourth Generation of Standard Model Fermions

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Abstract— Current experimental bounds on fourth-generation, standard model fermion masses are revisited. Assuming a fourth generation, we cast uniformly distributed masses for four fermions and determine a probability density function based on consistency with the electroweak oblique parameters, S, T, and U, convoluting over Higgs masses. Recent Tevatron combination limit on Mh in the fourth generation scenario is used and a probability density function for the four fermions is obtained.